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10/729,892	12/08/2003	Joseph K. Fauty	ONS00515	2116

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EXAMINER

GRAYBILL, DAVID E

ART UNIT PAPER NUMBER

2822

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/729,892

Applicant(s)

FAUTY ET AL.

Examiner

David E. Graybill

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*fm*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Restriction to one of the following inventions is required under 35

U.S.C. 121:

- I. Claims 1-11, drawn to a process, classified in class 438, subclass 123.
- II. Claims 12-14, drawn to a product, classified in class 257, subclass 666.
- III. Claims 15-17, drawn to a process, classified in class 29, subclass 827.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process such as a process having no step of forming a leadframe strip.

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced

with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process of using that product such as a process having no encapsulating.

Inventions I and III are related as process of making and process of using the product. The inventions are distinct because the process of using the product can be practiced with a materially different product than the product made by the process of making the product, such as a process of using a product not having a plurality of cavity sections.

Applicant's election with traverse of Group 1, claims 1-11, in the reply filed on 7-14-5 is acknowledged. The traversal is on the ground(s) that the claims are drawn to a product, a process of making the product, and a process of using the product. This traversal is deemed persuasive, and the restriction requirement is restated herein.

The requirement is still deemed proper and is therefore made FINAL.

Claims 12-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7-14-5.

In the rejections infra, generally, reference labels are recited only for the first recitation of identical claim elements.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, and 9-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Asano (JP05067715).

In the drawings, and English translation and abstracts, Asano discloses a method of forming a semiconductor package comprising: providing a leadframe 10 having a main panel 13, a cavity section (illustrated, not labeled), and a plurality of leads (all 12 or all 12 and the lead illustrated, not labeled, connected to corner of 11) extending from the main panel into the cavity section, the main panel no greater than a first distance (equal to 0) from an outer edge (defined by the outer edge of 18) of the cavity section and at least a first lead of the plurality of leads extending no greater than the first distance from the cavity section toward the main panel; encapsulating the cavity section of the leadframe to form a package body 18; forming a first portion of the main panel into a portion 19 of the first lead including forming the portion of the first lead extending greater than

the first distance from the package body; and excising "etching" a second portion of the main panel away from the first lead; wherein providing the leadframe having the main panel, the cavity section, and the plurality of leads extending from the main panel into the cavity section, the main panel no greater than the first distance from an outer edge of the cavity section includes forming the first distance no greater than approximately 0.5 millimeters (0 millimeters); wherein excising the second portion of the main panel away from the first lead includes leaving a third portion 19 of the main panel attached to an end of at least one lead of the plurality of leads; "plating" exposed portions of the plurality of leads; wherein forming the first portion of the main panel into the portion of the first lead of the plurality of leads includes trimming "etched" the main panel to form the portion of the plurality of leads; wherein forming the first portion of the main panel into the portion of the first lead of the plurality of leads includes forming the portion of the first lead extending no greater than about 0.5 millimeters (0 millimeters) from the package body 9; wherein forming the first portion of the main panel into the portion of the first lead of the plurality of leads includes selectively forming the first portion of the main panel into a number of leads (all 12) that is less than all of the plurality of leads (when the plurality is defined as all 12 and the lead illustrated, not labeled, connected to corner of 11); wherein forming the first portion of the main panel into the

portion of the first lead of the plurality of leads includes forming the first portion of the main panel into a number of leads that is equal to all of the plurality of leads (when the plurality is defined as only all 12); wherein providing the leadframe having the main panel, the cavity section, and the plurality of leads extending from the main panel into the cavity section, the main panel no greater than the first distance from the outer edge of the cavity section includes forming the leadframe devoid of a dam-bar between the main panel and the cavity section.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano (JP05067715).

Asano is applied as applied to claim 4.

However, Asano does not appear to explicitly disclose excising the end of the at least one lead of the plurality of leads from the main panel after plating exposed portions of the plurality of leads; and plating the plurality of leads and the main panel prior to the step of forming the first portion of the main panel into the portion of the first lead.

Nevertheless, as can be reasoned from well established legal precedent, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose the particular claimed process sequences because applicant has not disclosed that, in view of the applied prior art, the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. Moreover, it is well established that, in a well known process, the order of performing process steps is prima facie obvious in the absence of new and unexpected results. See *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946); *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959); *In re Gibson*, 39 F.2d 975, 5

USPQ 230 (CCPA 1930).

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano as applied to claims 5 and 8 supra, and further in combination with Kobayashi (5221859).

Asano does not appear to explicitly disclose excising the end of the at least one lead of the plurality of leads from the main panel after plating exposed portions of the plurality of leads; and plating the plurality of leads and the main panel prior to the step of forming the first portion of the main panel into the portion of the first lead.

Regardless, at column 9, lines 55-68, Kobayashi discloses excising the end of the at least one lead of the plurality of leads from the main panel "plate" after plating exposed portions of the plurality of leads; and plating the plurality of leads and the main panel prior to the step of forming the first portion of the main panel into the portion of the first lead. Furthermore, it would have been obvious to combine this process of Kobayashi with the process of Asano because it would improve humidity protection.

The art made of record and not applied to the rejection is considered pertinent to applicant's disclosure. It is cited primarily to show inventions similar to the instant invention.

**For information on the status of this application applicant should check PAIR:** Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Alternatively, applicant may contact the File Information Unit at (703) 308-2733. Telephone status inquiries should not be directed to the examiner. See MPEP 1730VIC, MPEP 203.08 and MPEP 102.**

Any other telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (571) 272-1930. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.  
The fax phone number for group 2800 is (571) 273-8300.



David E. Graybill  
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Art Unit 2822

D.G.  
27-Sep-05